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## RAMBLES AMONG THE HILLS.

A HILL-COUNTRY in breezy, sunshiny weather, with a purpling gleam on the heather, and the scent of wild thyme and yellow clover in the air, with the windy masses of cloud chasing the changeful lights and shadows across the wide landscape, and sending straggling shafts of sunshine through the gleaming underwood of birch and hazel that line the banks of this brawling moorland stream—can anything be more charming? Who would not envy Mr Louis J. Jennings his *Rambles among the Hills*,\* or refuse assent to his proposition, that a more beautiful country than our own to stroll over is not to be found on the surface of the round globe; provided only that one can have the sun for a companion, for, of a certainty, gloomy skies and perpetual rain dull the rich tints of glen and moorland, and take the brightness out of the loveliest scenes.

In his walks, Mr Jennings preferred to leave behind him much-frequented routes, and chose for his rambles the region of the Derbyshire Peak and South Sussex Downs, because the ordinary crowd of tourists leave them alone, and there is really very little known about them. The best headquarters that can be chosen for an excursion into Derbyshire is Chatsworth. Its stately hall and beautiful park, its woods redolent of sweet scents and sweeter flowers, the subdued tint of the swelling uplands beyond, melting away into the far blue shadows of the Peak—all these are familiar to the multitudes who frequent Buxton, Haddon Hall, another of the lions of this favourite watering-place, offers a scene of peculiarly English beauty. Seen in the stillness of sunset, with the crimson light flecking here and there the grassy glades under the oaks and beeches, nothing can equal its tranquil beauty. But almost more interesting, because less of a show-place, is the ancient Hall of Hardwicke, built by Bess of Hardwicke, who was, by dint of her

successive marriages and jointures, perhaps the richest woman of her day.

Her third husband, the Earl of Shrewsbury, was one of the many jailers of Mary Stuart; and a great deal of old tapestry which still remains in the house, is said to be the work of the beautiful and ill-fated Queen of Scots. Bess, whose charms were more those of the purse than of the person, was jealous of her fair captive, and led the Earl such a wretched life on her account, that he complained bitterly to the Bishop of Lichfield 'that she had reduced him to the condition of a pensioner.' The good Bishop tried to console him by telling him 'that if shrewdness or sharpness may be a just cause of separation between a man and wife, I think few men in England would keep their wives long.'

A portrait of Mary hangs in the library of this home, to whose peace she was so fatal. It was painted just before her execution, and shows us a face from whose wan, haggard outlines the fresh soft beauty of youth and happiness have fled for ever. In the dining-room hangs a portrait of Bess herself, a hard, resolute, sensible face, but scarcely that of 'the sharp and bitter shrew' my Lord of Shrewsbury accounted her. By her side hangs a portrait of her second husband, Sir W. Cavendish. The grim, lonely castle of Bolsover was also a favourite residence of this oft-married widow; and here again is much beautiful tapestry, the work of the Scottish queen, whose industry at least ought to have commended her to her ungracious hostess.

The scenery of Dovedale, a favourite resort of tourists, is more distinctively striking than beautiful. The river Dove flows between steep banks, laden with a tangled luxuriance of hawthorn, mountain-ash, and bramble, with a gay undergrowth of wild-flowers—tall spikes of yellow snapdragon, clumps of white campion, crimson patches of ragged Robin, and starry clusters of fragrant woodruff, suggestive of newly mown fields of hay. By the river-side, embosomed in trees, is a little square cottage, built in 1674 by Charles Cotton, in which he entertained the prince of

\* London: John Murray.

anglers, and dear companion of all lovers of the gentle craft, Izaak Walton.

Through this country, with its snatches of picturesque scenery, its smooth stretches of river-bank, its woods of beech and oak, its tangled mazes of fern and brier and wild-flowers, and its undulating breadths of moor and common, our author was slowly working his way towards Edale and Kinderscout—the advanced guard of the picturesque array of heather-clad hills which surround the Peak. He has a weakness for by-paths, which has doubtless helped to his practical acquaintance with the varieties of vegetable and animal life to be found in morass, ditch, and peat-hag. On the occasion of which he speaks, darkness surprised him among the meadows by the banks of the Dove; and he emerged from them, after much devious wandering, such a wet, muddy, wretched-looking object, that he was surprised to receive a friendly greeting from the landlady of the *Charles Cotton Inn*. The kind hostess, undaunted by the mud and dirt with which he was incrustated, 'brought me,' he says, 'into the kitchen, where there was a good fire. She gave me a pair of socks, and told me they were accustomed to do this friendly turn for travellers who had been through Dovedale, and who almost invariably landed soaking wet. "We even lend them trousers," said the good soul. But luckily my case was not so bad as to call for so great a sacrifice.'

Morning among the hills, a fresh breezy morning, with a great flood of sunshine lying warmly on the purpling stretches of heather and the few buds which still linger on the wild roses. Early as every tourist should be, Mr Jennings has already climbed to the summit of Mam Tor, above and opposite the village of Edale. Here a view bursts upon the eye, 'to which it is,' he says, 'impossible to do justice. It may be doubted whether there is anything finer to be seen in England, for it includes almost everything which goes to form magnificent scenery, except water. To the north, the lovely Valley of Edale lies spread below, guarded by a range of hills at each end. On the other side is the almost equally fine Valley of Hope, with heather-covered hills stretching away for many miles. Fresh from a visit to Switzerland, it seemed to me that I had seen nothing more beautiful and attractive. If the Kinderscout range were in Switzerland, scores of books would have been written about it, and sanatoria without number would have been established on its hillsides.' Indeed, Mr Jennings is inclined to give the preference to this beautiful hill-region of Derbyshire. It does not suffer from the extreme heat of the Swiss valleys, and it is free from the insect pests, the mosquitoes and horseflies, of which all wayfarers in the Brunig Pass in July and August must retain lively recollections. The groupings and surroundings of these hills, the deep cleughs and valleys which intersect them, the picturesque torrents, with the fringes of copewood which feather their banks, are indescribably beautiful. Charming under every aspect, whether seen shimmering indistinct and vast through the tender pale gray of the morning mists, or basking in the smile of noon, with the sunshine sending long shafts of radiance up the green sequestered valleys, or half in gloom, half in the dusk yellow light of declining day, when weird shadows fall athwart the long stretches

of heath, and fill with blackness the deep ferny glens.

From Edale Head the tourist can see for himself the true nature of the Peak. 'It is a mass of wild hills, with a sort of bog or moss-covered plateau in the centre, surrounded by a vast extent of wild moors.' Beautifully situated among the hills is a fine old house, called Derwent Hall, the property of the Duke of Norfolk. Although only used as a shooting-box, it contains a superb collection of the most wonderful old oak furniture—sideboards, beds, settees, and cabinets, so exquisitely carved and withal so ancient, that they would make the fortune of any collector.

The Peak itself is sterile and desolate in the extreme; even sheep cease to be met with in its barren solitudes. All around is a wild, trackless waste of moss and bog, and stern, naked, lonely hills. 'These mountains are broken up into huge shoulders, with streams running between many of them, deep in heather and ferns, and of a very dark colour, owing to the peaty water that trickles over the surface and stands in deep pools.' Long broad gulches also intersect these barren moors—trenches from ten to twelve feet deep, with soft peaty sides, and a bottom of water or mud, according as the weather is wet or dry. Immense masses of dark rock, sometimes cast by Nature into the most fantastic forms, cling to the steep hillsides, or rise from the level of the moor. From one of these, the Heron Stone, a magnificent view may be had by the returning tourist of the whole range of the Kinderscout, with a picturesque valley and bridge in the foreground, and a little stream, gray and silvery in the waning light, plashing through the furze and fern into the evening shadows. Far as eye can reach, no path is to be seen; all is dark moor and dusky fern, relieved by an occasional patch of vivid green, which experience will have taught him to avoid as treacherous and swampy; and here and there the gleam of water, as a mountain pool or runlet catches and reflects the faint radiance of the evening sky.

After these treeless wastes, one is in the mood for enjoying trees, and ought to accompany Mr Jennings to Sherwood Forest. Although immense areas of the ground have been cleared from time to time, this old Forest still retains deep shady recesses, grassy glades, paradises of woodland scenery, with splendid oaks and beeches interspersed with dark firs and yews. The effect of some of these long avenues of stately trees is simply magnificent. In spring, you have the delicate green of the beech, contrasting beautifully with the reddish-brown of the budding oak; and in autumn, oak and beech alike blaze out into a thousand brilliant shades of gold and russet brown, warming at the extremities of the branches into dusky crimson. To see Sherwood to perfection, the sky should not be perfectly clear, but heaped up with masses of drifting clouds. The shifting lights and glooms of a windy day lend variety to the silvan scenery; the trees wave and rustle in the breeze; and the sunlight chases the shadows across the ferny glades, and down the long leafy aisles of the forest sanctuary. The Birklands—one of the most ancient portions of the old Forest—struck Mr Jennings as surpassingly beautiful. 'The visitor,' he says, 'will find his admiration equally divided

between the grand old oaks and the beautiful silver beeches which cover many acres of ground. Finer or lovelier trees are not to be seen in all England; and the contrast between their tapering branches and the rugged trunks and gnarled boughs of the grand old oaks, is full of picturesque effect at every step.

Some of the individual trees are very large. The Shambles Oak, which is considered to be a thousand years old, was of enormous girth; but it is now only a shell, the inside having been burned out. The Greendale Oak, which is eight hundred years old, was formerly so large, that it was said a carriage could be driven through its trunk; but it is now a mere shell, although it still 'makes a fair show of green leaves as summer comes round.'

Around another of these forest giants, called the Major Oak, Mr Jennings one day saw 'eighteen persons, men, women, and children, standing hand in hand, stretching round it at arms' length, and they were but just able to meet each other.' Almost the best point from which to see Sherwood is a comfortable homely little inn *The Royal Oak*. It is in close vicinity to the Dukeries; so called because this district comprises the houses and parks of three noblemen, one of whom, the late Duke of Portland, spent at his seat, Welbeck Abbey, no less a sum than two million pounds on tunnels, underground chambers, and other subterranean works. He had conservatories, ball-rooms, skating-rinks, and riding-schools all underground. 'There is a chapel to which one is taken up and down by lifts; and tunnels without end. One of these is two miles and a quarter in length; it is lit partly by gas, and partly by ground glass from above; and the work inside is as carefully finished as though it had been intended for the front of the Abbey.'

Leaving Birklands, with its shifting lights and shadows and flashes of sunshine flickering through the tender green of the feathery foliage, our author next betook himself to the South Downs, where there is hill-scenery not so savage and desolate, but in its own way quite as attractive as that of Derbyshire. The views are extensive and beautiful. In all directions spread tranquil green fields and woods so notably English, ancient churches and old farmsteads dotting the peaceful prospect; while over the rounded green combs, and the charming hollows and wooded slopes, mingling with the scent of the wild thyme and the cowslip, comes the grateful breath of the sea, which can be seen from almost all points of advantage.

Near Bignor, there are interesting remains of a Roman villa, which was discovered in 1811. This structure is six hundred feet in length, and covers the area now occupied by two fields. Fifty-two rooms have been discovered, some of them very large. 'The visitor will be struck by the traces of comfort and luxury which are still visible in the various apartments—the hot-air pipes, the space for a fountain, the bath-room, and other contrivances, which in these enlightened days would scarcely find a place in the designs of an ordinary architect.' Here, during our long sunless winters, with as much of comfort, and as many of the appliances of civilisation as he could collect around him, shivered the exile from Imperial Rome; solacing himself, for the lack of the sunny

skies of Italy, with many works of art, whose fragments still remain.

Wiston Park is one of the most beautiful spots in the South Downs. It is framed in by a background of picturesque hills; 'and the park is one magnificent lawn, studded with fine aycamores, oaks, and other trees, and commanding exquisite views over Sussex and Surrey.' Deer wander in the sunlit glades; and the deep lanes in spring are bright with primroses, anemones, and violets, which fill the air with their delicate scent. On Chanctonbury Hill, at the extreme verge of the park, there is a circular mound, the remains of old earthworks; an ancient British or Roman camp, which has been planted with a double row of trees. Chanctonbury Ring, as it is popularly called, forms a very picturesque feature in the landscape, and is seen from almost all parts of Sussex.

At the village of Kingston is an old church with a low tower, which was given by William de Warrenne, a son-in-law of William the Conqueror, to God and St Pancras. This ancient sanctuary, where prayers and thanksgivings have been offered up for so many centuries, forms an interesting feature in the landscape; and behind it, over the red-tiled and thatched houses of the village, you can see the sea sparkling in the sun, and listen in the drowsy heat of noon to the melodious tinkle of the distant sheep-bells.

In these quaint, old-world Sussex villages, very fine old houses are sometimes to be found, such as that of Plimpton Place, in which Lennard Mascall lived in the time of Henry VIII., this Lennard Mascall being famous as the first who introduced carp into England. His once beautiful mansion has been allowed to go to utter wreck and ruin, and is now hopelessly dishonoured and defaced. The windows are broken; the fine old oak-carving is chipped and knocked to pieces; fragments of tapestry hang rotting on the bare walls; the stagnant moat is covered with a thick oily scum; and everywhere, the defacing impress of abject poverty has been set—a painful and dispiriting picture.

Ashburnham Park is a lovely spot; and the walk to it from Heathfield 'abounds in charming views of hill and dale, woodland and meadow.' The park is ancient and picturesque. It abounds in magnificent trees, and exquisite views of the long line of the South Downs, and the range of hills which extends from Fairlight to Ashdown Forest. In the library of the old house, which was occupied by Bertram de Esburnham at the time of the Norman Conquest, many precious literary treasures are preserved—two manuscripts of the fifth century, a Treatise on the Psalms almost as ancient, a Pentateuch of the fifth century, and a large collection of ancient Bibles. There is also a copy of the Apocalypse, of the sixth century; and numerous first editions of celebrated English books, such as *Paradise Lost*. There are also relics of another kind, which would have been dear to the hearts of our Jacobite forefathers, such as the watch and under-clothes which Charles I. wore on the day of his execution, and which were bequeathed by him to John Ashburnham, who was faithful to him to the last. The latter consist of a very fine cambric shirt, a pair of silk stockings and garters, and silken drawers. The wristbands of

the shirt are delicately embroidered, and it is marked in coloured silk with the letters C. R. and a crown. The watch is of an old-fashioned shape, and has an enamelled face.

With the delightful scenery of Ashburnham, we close Mr Jennings' charming book. The colours on his glowing canvas fade perforce away; a haze gathers over the faint purples of the Derbyshire hills, and the rich greens and browns of wood and meadow and moorland. Even as we gaze, a gray shadow of farewell creeps over the 'grand old South Downs,' with their perfume of wild thyme, and briny fragrance of the sea; and the curtain drops over many a hidden beauty of their untrodden nooks, and forsaken roadways, and quaint, rambling, flower-scented lanes.

### THE FORTUNES OF BERTRAM OAKLEY.

#### CHAPTER XXXI.—IN THE AVENUE.

'GOOD-MORNING, Mr Oakley. Glad to see you; and glad to find that, like myself at your time of life, you are an early riser. I called at your lodgings on my road, thinking we might walk down together; but they told me you had breakfasted and gone out, long ago.' Such was Mr Weston's greeting to Bertram when, on arriving at the Yard on the morrow of the day succeeding that of the young man's arrival at Southampton, he found his new Assistant Manager awaiting him there.

'I found I had time on my hands,' said Bertram, smiling; 'and I have spent it in making acquaintance with the Docks hard by.'

'Right, quite right! The more you see of ships, the better,' answered his superior, as he led the way to the counting-house, where already the more diligent of the clerks had hung up their hats and settled themselves on their official stools to commence the labours of the day. 'Now, my young friend,' said the Manager, when he had opened the letters which lay ready on his table, and given some instructions to his subordinates, 'I cannot do better than show you over the Yard, and explain to you what your duties will be, and which department will be under your control. This'—opening the door of a room, the first of a series of rooms, the paint of which was still fresh and glistening, and the wall-paper damp and new—'this is your office—hardly yet out of the workmen's hands; and indeed, you need scarcely enter on your functions until to-morrow. Just come round the place, though, with me, and I can explain as I go.'

So Mr Weston showed Bertram the Yard, the vessels that were in their cradles, almost ready for launching; the unfinished craft in process of construction, and those of which the keels had barely been laid down. He showed him the stores where the materials were kept; the extensions of the premises, but half complete, and where gangs of navvies were toiling with barrow and plank, and pick and shovel, to widen and deepen the excavations where wet-dock and dry-dock and coffer-dam were to be—the slips, the workshops; everything; often pausing to explain to Bertram what was to be his share in the task of inspecting and directing the labours of the stalwart men who were busy with saw and adze and auger, with

hammer and mallet, with rivet and treenail, all around.

The experienced Manager, as the circuit progressed, began to entertain a higher opinion of his junior than he would yesterday have believed to be possible. Worthy Mr Weston, though an excellent man of business, was personally the reverse of brilliant—a plodding, patient man, who had risen in the world by dogged industry and severe integrity; but he was naturally slow to learn, and felt an odd sort of unconscious resentment against those who were apter pupils. A dull man is very prone to cherish feelings of this sort. Mr Weston was never willingly unjust. If he had been, he would not have been for three-and-thirty years a valued subordinate, in various capacities, of Mervyn & Co. But he did feel, as some of those old schoolmasters of the pre-dictionary times were wont to feel, as if the road to knowledge ought to be very stony, rugged, and painful, and the pilgrim's progress not too quick.

But there was something in Bertram that overcame prejudice, when the prejudice was honestly held; and Mr Weston presently began to wonder whether his previous opinion, as to Mr Mervyn's mistake in appointing so young a man to a place of trust, might not have to be reconsidered. He had been prepared to expect a shallow, self-confident youth, cleverish, but unsteady, and no more fit to be Assistant Manager than a skittish Park hack is fit to draw an omnibus. But Bertram was so patient, so modest, and yet so strangely intelligent and prompt to grasp the really important details of whatever was explained to him, that Mr Weston was fairly puzzled. It seemed to him as though his new adjutant, in a very little while, would be able to master every point of the complicated system which the Manager had hitherto regarded as a mystery comprehended by himself alone.

Working-hours, for Bertram, were over on that day when the tour of inspection was at an end. On the morrow, he was to be installed in his new office, and to enter on the novel duties of a post that required discretion as well as zeal and energy. He went back, then, to his lodgings and his books; and after his early dinner, rambled out afresh, turning his back to the city and its frowning Bar, and going countrywards. He walked slowly, and the more so that he was deep in thought. How had the aspect of the world's face changed for him since the bleak winter's day on which he had left the Old Sanctuary at Westminster in search of a crust to eat and a roof to shelter him! And how best could he prove that the great good fortune which had befallen him had not been bestowed on one who was ungrateful for the generous confidence of his patron?

Musing thus, Bertram passed on into the broad Avenue, lined by stately trees, and with its wide carriage-road, its separate bridle-track, and its smooth path for the use of foot-passengers, which is one of the boasts of the ancient town; just such a promenade as we find almost everywhere on the continent, save that the stunted lime-trees of Germany or the attenuated poplars of France are here replaced by huge elms, the leafy boughs of which made a pleasant murmuring on that summer's afternoon, as the breeze sighed among the branches. There were carriages rolling along the well-kept road, and riders cantering their horses



on the further side of the parade. But, notwithstanding these attractions, Bertram remained absorbed in his own thoughts, until, suddenly, there came before his vision a glint of golden hair, and the unforgettably sweet, innocent face of Rose Denham! Rose it was; but how changed, how womanly, and yet herself, fair and tender as the choicest bud of the flower from which she took her name! Yes; it was Rose; and she was not alone, for near her sported two pretty children—a girl of nine and a boy of a year younger, prettily dressed, as the children of the rich now are, and with flaxen curls tossing in the wind. Rose was passing him, when he half-stretched out his hand. 'Don't you know me?' he said, lifting his hat as he spoke.

'Mr Bertram—Mr Oakley,' the girl replied shyly, and startled, like a fawn alarmed by some intruder amidst the fern and bracken. 'I did not expect to meet you here!' And she put out both her little hands to him, in greeting; but as she did so, her lip quivered; and Bertram knew that the sight of him had reminded her of the dear, dead father, Bertram's early friend. She welcomed him, however, in her old, pretty way. 'I am so very glad to see you,' she said. 'I live near here, as my sister may have mentioned, if you have seen her lately—at Shirley, a mile or so away.—And these are my pupils,' she added; 'Alice and Hughie Denshire. I am Mrs Denshire's governess, now.'

#### CHAPTER XXXII.—THE MYSTERY.

The children, considering that the mention of their names constituted a formal introduction, walked gravely up and extended their tiny hands to be shaken. Bertram had one of those faces that children like and trust; and bright Alice and solemn-eyed Hughie, who in his velvet and curls looked like a miniature of some melancholy but chivalrous Cavalier, were soon at ease in the company of their teacher's friend, and resumed their gambols, leaving Rose and Bertram free to walk and talk together in the leafy Avenue.

'You knew I was here; but I did not know you were here. Louisa should have told me,' said Rose, as they paced on side by side.

'Miss Denham could not have done that,' replied Bertram, 'because promotion and a change of residence came to me so quickly, and in so unlooked-for a fashion, that I had not time to call in Lower Minden Street before leaving Blackwall and London. Miss Denham, on the occasion of my last visit, told me that you were in Southampton, or near it.'

'Yes; I live at Shirley Villa—on Shirley Common, as they call it, half-an-hour's walk from this,' Rose explained. 'Mr and Mrs Denshire, to whose children I am governess, are nice, kind people. They have been very considerate and good to me, seeing, I think, that I was young and half-frightened at first at leaving home. I call Lower Minden Street "home," you see, for Louisa is there,' she added, half tearfully.

'I know; for your sister told me how you came to leave her, and why,' returned Bertram gently. 'It was like yourself to do it; and like her to consent to it. But I was sorry when I called, to find that you had gone. I did not think, then, that we should meet so soon.'

Then there was more talk, and he told her of his sudden rise in life. 'Assistant Manager here,' he said playfully. 'It sounds too grand, too good, to be true; and I am afraid my superior officer, Mr Weston, thinks so too, to judge by his looks; but I hope he may think better of it one day.'

'Is Mr Weston your—superior officer?' asked Rose; and reading assent in Bertram's eye, she added: 'Because I know the Westons—my employers know them, I should say, very well; and I often see Mrs Weston and her daughters, and that beautiful Miss Carrington, at the Archery Grounds, and at Shirley. Then do you live with them, now?'

Bertram explained the whereabouts of his lodgings—very near to Mr Weston's house; and explained his relations, officially, with the head of the family. 'He is Colonel, so to speak, and I am Adjutant, of the regiment of workers in Messrs Mervyn's local Yard,' said Bertram; 'and if I do but learn my duties as well as he has done, all will be well. He thinks I am too young. He has not said so; but I read it in his face. Never mind. I can but do my best to justify my early promotion.'

'That I am sure you will,' said Rose warmly; and then she blushed and looked down.

Then, for a while, the conversation languished. A keen observer, had such been there, might have noticed that each of these two young people looked at the other shyly, coyly as it were, as if each had grown to be half a stranger in the interval that had elapsed between the times of their former intimacy and their present meeting. Rose was so womanly, and so much more earnest and thoughtful than of old, and yet her own sweet self, the Rose Denham of Blackston, the bright young girl whom Bertram remembered so well. Bertram was changed too. Tall, manly, and with a bearing more assured, yet as graceful as in his stripling days, Rose felt half afraid of him; yet she trusted him instinctively.

'Ah, if I had but such a brother!' was often in her thoughts as they walked along.

'I wish you were my brother,' she presently exclaimed abruptly, and then flushed crimson.

'Why, Miss Rose?' returned Bertram, fairly taken aback.

'Because, Mr Oakley, I could ask you then for—for counsel—and help—in a matter on which I have no one else to advise me, and cannot ask for advice.—I have so few friends, and not a soul but yourself and Louisa to whom I could appeal.—Do I vex you, by saying this?' she asked piteously, as he kept silent.

'On my life, on my soul, no!' was Bertram's eager answer. 'Only show me how I can serve you, dear Miss Rose, in any way; and for the sake of your generous father, for your own sake, I would, and will, spare no pains to be useful.'

Still Rose hesitated to speak. She glanced up at Bertram, so calm and strong, with his dark eyes, so full of thoughtful light, fixed upon her, and with an effort she at length said: 'I have been so frightened—I am very silly, perhaps; but I am young, and know so little of the world—and he frightened me.'

'Who has dared to do that?' demanded Bertram, with a sternness that was new to his voice. He had, as many brave men have, a temper that was patient and genial; but the idea of wrong or

harshness to the tender and the innocent, brought a glittering light into his eye that few ill-doers would have cared to confront.

'He—the person I spoke of,' explained Rose, in feminine fashion—'he persecutes me. I never know when he will come. I should not like to be walking here, but that Alice and Hughie are some protection, and the place so public. But he frightens me.'

'Some impertinent coxcomb—some silly fellow, who presumes to annoy you in your walks,' exclaimed Bertram. 'If only you could point him out to me, I would take care that you should be no longer molested.'

'No,' replied Rose, half sobbing—'no; it is not quite that. The man is not rude or impertinent, but he scares me. He tells me, Mr Oakley, that for Louisa's sake, I must listen to him.'

'For Louisa's sake? for the sake of your sister?' exclaimed Bertram, astonished. 'Why, how, in the name of all that is amazing, did he know of her existence, and what does he want?'

'He wants—to marry me,' said Rose, speaking in a very low voice, lest the children should overhear; 'and he says that I *must*, for Louisa's sake and mine—that he can make or mar both our fortunes—that it rests with him to make us end our days in affluence, or struggle on in poverty, and, and, and—'

'The fellow must be mad!' cried Bertram, knitting his brows—'mad, or else an impudent impostor. Do you know him—his name, I mean, or where he lives, or what his rank in life or calling may be?'

'I do not think he is mad,' answered Rose decisively. 'He talks strangely; but what he says is always coherent. As for his name, or where he lives, I know nothing. He comes and goes like a ghost. I may see him once or twice a day, and not again for a week. Whether he even lives in Southampton, I do not know. I have sometimes fancied that he did not. And I have not liked to write to Louisa about it, for fear she should be frightened for me; nor do I dare to tell Mrs Denshire. She would laugh at me, or perhaps talk of the police. And I thought, Mr Bertram—'

'You thought, Miss Rose, that I might help in protecting you from annoyance, as heaven knows I willingly would,' said Bertram, completing the unfinished sentence. 'But this is a perplexing state of things. If the man is not rude—'

'No; he is not exactly rude, but peremptory. He says it is my duty, and my fate, to be his wife,' replied the girl. 'He talks of wealth for me, wealth for Louisa, and always as if the fortune of which he speaks were in his free gift, to bestow or to refuse, at his pleasure. And as he saw, perhaps, that riches do not tempt me much, he dwells upon my duty to my sister, and on the happy home I might share with her.'

'How did he first find you?' asked Bertram, growing more and more thoughtful.

'He came upon me in a shop, where I had gone to execute some commission for Mrs Denshire,' replied Rose. 'But I think—I am sure—he had been following me for some time before that. Then he entered, and took off his hat, and called me by my name. He asked for a minute's conversation. I could not get away, and he spoke. He has waylaid me since then, in the streets, on

the Common, everywhere, and always on the same pretext.'

'What sort of man is he? Young or old? A gentleman, at least, he cannot be,' said Bertram.

'He is not young—nor is he old; and I cannot guess what he may be. He is very well, but too showily, dressed, with a superfluous display of trinkets. He is not so tall as you are, but active, and very dark and sunburnt, and has a habit of twisting his long black moustache, that droops over his mouth, when he gets earnest.'

'Ah!' exclaimed Bertram, with an involuntary start of surprise. In whom, once, had he noted such a trick of manner? He could not at the moment remember. He did his best, however, to comfort Rose and to charm away her fears, bidding her look upon him as if he had been indeed her brother, and promising to do his best to protect her from annoyance. And then, as it came to be time for them to part, he told her that, with her permission and Mrs Denshire's consent, if Rose would ask it, he would call at Shirley Villa on the earliest day on which he could do so without neglect of duty.

'Mrs Denshire will be willing to see you, I am sure,' answered Rose, 'when I tell her of old days, and that you are Mr Weston's friend. And you will find me, generally, when the children and I come back from our walk, as now. I shall write Louisa word of your good fortune, and she will be glad, as I am.—And now, good-bye!'

So they went their several ways; Rose with her charges returning to Shirley; while Bertram, with a thoughtful brow, went back to the town. He felt nearly sure, now, that he remembered when and where he had noticed that trick of twisting the moustache to which Rose had alluded. But then the offer, the confident offer, of a fortune in exchange for Rose Denham's hand. The thing was impossible! Yet his mind dwelt upon it.

(To be continued.)

### IRISH MATCHMAKING.

NEARLY every one has heard of Shrove or Match-making time, though few really know to what extent it is carried on in the south of Ireland. A few particulars and some instances of the 'matches'—for such is the name that proposed marriages go by—may not be uninteresting to those unacquainted with the custom.

'Shrove-time' begins after Christmas, and ends on Shrove-Tuesday, or the day before Ash-Wednesday; as, during the ensuing seven weeks of Lent, no marriages are celebrated in the Roman Catholic Church. About three weeks before Lent is the busy time for the 'matchmakers.' These are men who make it their business to find out the fortunes of, and get suitable partners for, all the eligible young people of both sexes for many miles around. Sometimes they are remunerated for the transaction, but far oftener they carry it out for mere pastime. Thus, when the well-to-do parents of a marriageable son find themselves getting on in years, and unable to look after their farm and all connected with it, they tell their *boy* that he must take a wife, and straightway send for their friend 'the matchmaker.' The old people, in such cases, are quite content to give up the farm to the son, seldom asking anything beyond their support,

and a seat in the 'chimney corner' in the 'old home' for the rest of their days.

The son who thus obtains possession of a house and farm is considered well off; therefore the girl he marries must have money equal, or nearly so, to his, or cattle wherewith to stock the land. When everything has been arranged between the parents on both sides, the day for the marriage is fixed, and the marriage-money made up for the priest, who generally gets from eight to twelve, though sometimes as much as fifteen or twenty pounds. The young people may meet once, or oftener, before they are married, but sometimes they see each other for the first time only at the altar.

Near the village of G—, lives a man named Mike S—. He is one of the principal match-makers in the neighbourhood. I know him personally, and have often heard him speak of some of the 'matches' he had made, or was about making. The last few years not having been so good as usual for farmers, the weddings were not so many, and the fortunes in most cases were small. One of the best for this season—and over which Mike was very busy—was the marriage of a farmer's daughter whose fortune was one thousand pounds. The young man 'spoken of' for her had a fine house, thirty milking-cows, twenty yearlings, and 'as fine a pair of horses as ever were put to a plough.' 'But that's not all,' said Mike; 'he has besides a brand-new thrashing-machine!'

Mike was very indignant over another match he had made, and was obliged, through 'the maneness of the old people,' to break it off again. 'They actually,' he said, 'wanted to make the young people feed some hens for them; and sure, when I saw them so stingy, I says to the girl: "Hold yourself higher than to enter that family!"' And she took his advice.

On another occasion when the aspiring bride and bridegroom met for the first time at the altar, the latter, surveying his intended, was shocked to find that she possessed only one eye. 'Faix,' said he, 'I will marry no girl unless *all* her eyes are there.'

When in the shop of the principal milliner in our village this Shrove, I asked if she had many bridal bonnets to make. 'No, indeed,' she answered. 'There's a girl of the Scanlans getting married to-day; but I made her bonnet two years ago.' 'How was that?' I asked. 'Well,' she replied, 'they were on the way to the chapel, when they had a difference, and the match was broken off; but, like a sensible girl, she kept the bonnet, and now it comes in handy enough.' Perhaps one of the most curious of these extraordinary matches is the following. There was a marriage arranged, and the friends were invited to the wedding. The party, amounting to the occupants of some half-dozen cars and a few horsemen, started for the chapel. Just as they stopped outside of it, the father of another girl came to the bridegroom and offered him his daughter with ten pounds more fortune than he was getting with the one he was 'promised to.' 'Done!' said the ungallant bridegroom; and straightway broke off the former match, and married the girl with the most money.

Few weddings in the neighbourhood are quite complete without Mike. He is a very extraordinary fellow, and gets into so many

quarrels, that, as his wife expressed it to me, 'he would have been hanged over and over again but for the master.' He lives on a wild moor surrounded by bogs. A near neighbour of his having got married through his influence, Mike, in duty bound, went to the feast. As the night wore on, the excitement of dancing, combined with a plentiful supply of liquor, began to have a bad effect on our friend, until at last he could contain himself no longer; and snatching a kettle of boiling water from off the fire, he turned bride and bridegroom and all the guests out of the house, and hunted them over the bog.

The eatables provided on such occasions are plentiful and wholesome. Cold meat of any kind, however, is considered an insult to offer. Everything must be *hot*. The fowls are generally captured, killed, made ready, and cooked, during the absence of the wedding-party at the chapel. Bacon is a favourite dish; and a leg of mutton is held in greater repute than roast-beef. Sometimes a 'barm-brack,' or large currant-loaf remarkable for its size and abundance of fruit, is ordered from the baker, and forms, as 'wedding-cake,' a conspicuous addition to the table. This 'Shrove-tide,' I saw a wedding-feast spread. At each end of the table was a huge piece of bacon. Down the centre of the table, beef, mutton, and the produce of the poultry-yard were largely represented. Several decanters full of wine, and bottles of whisky, were placed at intervals on the table. On a smaller table, tea, eggs, &c. and the 'cake' were laid out. This was a small and quiet wedding, the ceremony taking place as early as nine o'clock in the morning.

I must not omit to note, however, that punctuality on the part of the bridegroom—and sometimes even on that of the bride—is by no means invariably observed. I will give one instance, which happened this 'Shrove-tide.' The wedding was fixed for ten o'clock A.M. The bride came, but no bridegroom greeted her. She waited all day, till quite late in the evening, and still he came not. Late that night, a message arrived from him to say he would be at the chapel after first mass next morning. Next morning, faithfully came the expectant bride again; but again she had to wait all day for the dilatory bridegroom. At length, about seven o'clock in the evening of the second day, the tardy lover appeared; and though many brides would, after such a trial, have lost patience for ever, not so with the faithful Irish lass. The priest did his duty; and the two went away as happy as their own loves and the plaudits of their cheery neighbours could make them.

## THE FAMILY DIAMONDS.

### CHAPTER III.—AND LAST.

THE second day after our misfortune, I received a telegram from Robert, which ran thus—'Come at once by the express. Thief caught. Bring Martha with you. Your evidence required. Will meet you at station.'

How admirably he had filled in the twenty words! The news soon leaked out and spread over the village; and as we drove through it in Mr Thomson's trap, which he kindly lent to us for the occasion, every one turned out to

look at us; for, owing to gossip and the sensational accounts of the event that had appeared in the newspapers, we and our affairs were as public as if we were, as Martha said, 'the crowned heads of Europe.' The station-master was most obsequious, and himself held open the railway carriage door for us, and made the porters bring us foot-warmers.

'If I win them,' began Martha, breaking upon a reverie into which I had fallen as the train started, 'I will sell them, and get a good mortgage for the money at five per cent. Then I will buy a little pony and trap like Mr Thomson's—perhaps he'll sell me his cheap.'

'Talk of what you'll do with them when you've got them,' I burst in angrily. I declare it is perfectly disgraceful the way she makes eyes at that man. And at her age too! She ought to know better. Ah! well, I could tell things if I opened my mouth. I know who sent me those beautiful picotees in the summer, and it isn't Martha that he stops to speak to on Sundays after church.

Robert met us at the terminus. He looked very mysterious, and spoke very oracularly when we questioned him about Ayel's capture.

'O dear! what a crowd there is!' exclaimed Martha as we drove through the Strand. 'I suppose, though, they are all going to the Police Court to hear our case.' It was Martha's first visit to the busy Metropolis, therefore her astonishment at the thronged thoroughfares was excusable.

At length our ride came to an end. The cab stopped, and Robert assisted us to alight.

'O look!' again cried Martha excitedly, grasping his arm and pointing towards a dirty little boy standing in the gutter with a newspaper placard held in front of him. We looked, and there, in inch and a half type, was printed, 'THE GREAT INDIAN JEWEL ROBBERY—Capture of the supposed Thief.' It gave one quite a little glow to read it. It made one feel so important. Two policemen were guarding the entrance to the court; but as soon as Robert told them we were witnesses in the great case, they became wonderfully polite; and one of them escorted us into a dingy, dusty-looking place, where Ayel was to be arraigned for her crime. We were conducted to a seat very much like an old-fashioned church pew, and told to wait until our case was called, which would not be long, as it was first on the list.

'O dear!' sighed Martha, as she glanced apprehensively at the unwashed and unwholesome-looking crowd that thronged around us. 'I am so afraid of small-pox.' She had brought a monstrous double vinaigrette with her, at which she kept constantly smelling. 'You had better take a sniff, Patience,' she whispered, thrusting it under my nose. 'It will keep off infection.'

It was really too bad of her; for if there is anything that I thoroughly detest, it is aromatic vinegar. It always makes me sick. I pushed it away from me; and then some one cried 'Silence!' and a little, gray-haired, old gentleman came in through a doorway at the back of the court and took his seat in a large leather-covered chair.

'Where are his horse-hair wig and ermine robes?' whispered Martha.

'Hush!' I replied; 'don't speak so loud. Those are worn only by the judges.'

'Isn't he a judge?'

'No; he's a magistrate.'

'Oh!'

I do not think that she understood my explanation; but there was no time for anything more, as that treacherous black creature had just been placed in the dock by a policeman. She looked very wild and frightened, and glared around her just like a wild beast. Then Robert was made to stand up in the witness-box and take the oath, which I think he did most beautifully, kissing the book so reverently; and it must have cost him an effort to do so, for the cover was not particularly clean. The magistrate listened attentively to every word he said, and wrote it all down in a book. 'Have the jewels been found?' he asked.

'Yes, please Your Washup,' answered a policeman from the body of the court.

Robert was asked to stand aside for a few moments, while the man took his place; and I must say it was most improper the flippant way in which he took the oath. It was such a contrast to Robert's reverent dignity. In a few curt phrases, he told the magistrate that he had found the prisoner in a low eating-house at Lambeth, and that, when searched at the station, the jewels had been discovered in her possession. As he spoke, he produced the red bandana that she had been wont to wear tied over her hair, and unfolding it, displayed the lost jewels—the Maharajah's celebrated present—Aunt Purpose's diamonds! I leant forward eagerly to see them. Even Martha opened her eyes, which, since the commencement of the case, had been affectedly closed, and for the moment forgot to sniff at her vinaigrette. Yes; they were indeed beautiful, and well worthy of all our anxiety and trouble about them. A ray of sunshine had struggled through the dingy skylight, and falling upon them, made them sparkle and glitter with a thousand varied flashes of light. The set consisted of a necklace, a very large brooch, a pair of ear-rings, and a pair of bangles, which I thought were bracelets, but which turned out to be anklets. They were handed up to the magistrate, who inspected them very carefully. Then the policeman was told to stand down; and Robert resumed his former place.

'Are those the jewels?' asked the magistrate, as a clerk placed them before him.

'I believe they are,' he answered, as he gazed at them curiously.

'I must have something stronger than belief,' said the magistrate; and then a most astounding thing came to light. With the exception of the prisoner, there was no one, to our knowledge, in England who had ever seen the jewels before they had been stolen! Who was to identify them?

It was in vain that Robert produced the empty case and showed the marks where they had lain. That by itself was no evidence, the magistrate said; and before committing the prisoner, he must have some stronger legal proof put before him showing that the jewels that had been lost and those found on her were the same.

'I think I had better adjourn the case, to enable you to obtain this evidence,' he suggested to Robert, who was completely nonplussed at the turn affairs had taken. Was he to send out to India and subpoena the Maharajah himself? It seemed such a monstrous thing that, with no moral doubt on the subject, the law should pre-



vent our recovering articles of so much value as those in question.

'What is their value?' asked the magistrate, who had been giving them a second examination.

'Several lacs of rupees,' murmured that idiotic Martha, quoting my words as she sniffed at the smelling-salts' end of her vinaigrette until its strength made her gasp, and sent the tears coursing down her cheeks.

'Between three and four thousand pounds, I believe,' said Robert. The magistrate still went on looking at them, amidst a dead silence in the court, save for the noise made by those fussy reporters as they resharpened their pencils.

'Have you any one here who can give a positive opinion as to their value?' at length he asked, as he turned to Robert; but he could only shake his head.

Then, a lawyer who was in court rose, and told the magistrate that his client, who was waiting for the next case, was an eminent jeweller, and would be very happy to give the Bench his assistance. A tall, middle-aged, and gentlemanly looking man arose, and accepting the magistrate's invitation, stepped up beside him, and took the jewels in his hand. He turned and twisted them about, placed the tip of his tongue to them, held them up to the light, and then, fixing a small magnifying glass in one eye, he stared at them through it for the space of a few seconds. 'They are excellent—unequalled, I should say,' he said as, having finished his examination, he returned them to the magistrate. 'The finest that I have ever seen.'

Oh! how our cheeks flushed at this invaluable testimony to their worth, and how fast those clever reporters' pencils flew over their paper!

'And pray, what may be their value?' asked the magistrate. You might have heard a pin drop as every one listened for the answer.

'Their present value'—he spoke with provoking slowness—'may be—about—five pounds.'

It was as if a bomb-shell had fallen amongst us.

The magistrate smiled. 'They are then,' he said, 'as I thought'—

'Paste—made doubtless by one of the best French houses.'

The announcement was greeted with an uncontrollable burst of laughter; and I could have stabbed those conceited reporters. It did make me mad to see the gusto with which they wrote down what I knew they were describing as 'Sensation in court.'

To add to the confusion, Martha screamed herself into hysterics, during which she contrived to empty that nasty aromatic vinegar all down the skirt of my black silk; fortunately, it was not my best one.

I hardly know how we got out of the place and away from the vulgar crowd that pressed against us on every side. At last, I managed to drag her into a cab; and we drove back to the railway station, where, after a time, Robert joined us. Ayel, it appeared, after we had left, had confessed her theft, and been sentenced to a short term of imprisonment, the hapless jewels being returned to Robert.

Silent and glum, we returned to Nettlethorpe, hoping, by a discreet silence, to keep our shame and annoyance from our neighbours.

On searching through Aunt Purpose's papers, we discovered that she had been perfectly aware of the composition of the Maharajah's present; but owing to the prestige that the supposed possession of such valuable jewels gave her, had kept the secret—even to the deception of the confidential Ayel. It was too bad of her, though, to deceive so cruelly her husband's kith and kin, more especially as, to our chagrin, we found that all her and Uncle Job's savings had been sunk in an annuity, which of course died with her. After sending Ayel back to India, at the expiration of her term of imprisonment, which was more than she deserved after her ingratitude—the 'rest, residue, and remainder' of Aunt's property to be divided among us came to a trifle under a five-pound note. As for the jewels—drat them!—we would not draw lots for them. Robert sold them for two pounds ten, which he pocketed, to pay his expenses, he said, in his chase after Ayel. He never even offered either Martha or me the price of our railway fare to London—and it was first-class too, for we had to travel by the express—as he declared that it was insufficient to repay him all that he had expended.

Our resolution to keep silent about the events of our visit to London was rendered useless by those wretched papers. They not only published a full and unnecessarily detailed account of the case, but some of them actually made merry over our sufferings in leading articles! We thought, however, that the neighbours would have had the delicacy and good taste to respect our wishes on the subject; but alas!—for ill-manners commend me to a Nettlethorpean—instigated, as I verily believe, by that man Thomson—he thinks himself a wit!—they positively dared to give us a nickname, and since then, wherever we go, we are always known as 'The Family Diamonds!'

## RABBITS IN NEW ZEALAND.

BY A RUN-HOLDER.

A FEW years ago, one or two articles appeared in *Chambers's Journal*, giving an account of the mischief then being worked by rabbits in the southern part of New Zealand. Since then, the plague has greatly extended, in spite of legislation and all efforts on the part of holders of land. Now, however, there is a prospect of a better state of things; and it may be interesting to learn how, from small beginnings, utter ruin nearly came over a large tract of country, and the steps which are now being taken to avert it.

About a score of years ago, an immigrant to Invercargill, a town in the south of New Zealand, brought with him from England seven rabbits. He offered them for sale to the authorities of the former province of Southland; and they, thinking it would be a good thing to have some furred game on the sandhills which abound on the coast, gave him a small sum of money to turn them out there. I believe that rabbits were also turned out further north in Otago; but those seven were the progenitors of the mighty swarm which has infested the country.

For some years the rabbits seemed to stay about the sandhills, where there was very good shooting, and little was thought of them. When they got very thick, they fed so close to the ground that

the covering sward which held the sandhills together was destroyed, and the sand began to be blown inland, spoiling a good deal of ground. The rabbits themselves also became a nuisance to farmers near the coast; but these holdings are small, and by trapping and shooting, the farms can be kept moderately clear. The country back from the coast is a plain for twenty or thirty miles. Then come rolling grassy hills, where begin the sheep-runs. Farther back are mountains of about five thousand feet, fit for sheep; and farther still is the great backbone of New Zealand, so high and rough as not to be fit for any stock but rabbits. Among the hills and smaller mountains are many plains of considerable extent. The rivers Oreti and Aparima have exceedingly wide and shingly beds, and flow through flats for almost all their courses. The sandhills where the rabbits were turned out are between the mouths of those two rivers.

In 1876 the evil had grown to such an extent that the colonial government appointed a Commission to inquire and report as to the state of the rabbit nuisance, and to suggest remedies. The Commissioners travelled through the country, and made many inquiries. Their Report said what every one knew already—that matters were very bad, and likely to be much worse. An Act was then passed by the legislature which gave a bonus of a halfpenny for every rabbit-skin exported; and empowered the inhabitants of any district badly overrun with rabbits to elect a Board, whose duty it was to see that all holders of land destroyed their rabbits. In case any holder failed to do so, the Board was to have it done at his expense.

It is hard for any one not acquainted with the subject to understand the desolation wrought by apparently so small a plague. It must be remembered that the population in the greater part of the interior of Otago is very sparse—houses being seldom less than ten miles apart—that a run of fifty thousand acres is often worked by half-a-dozen men, and that rabbits breed once a month for eight months of the year, having from four to eight young ones at a time. The surest test of the evil is the decrease of sheep, and there are several runs where the decrease is three-fourths of the former stock. One run I know where the stock has diminished from twenty to five thousand. A sheep-run is generally a tract of country belonging to the Crown, whereon the run-holder, for a yearly rent or assessment, has the sole right of rearing stock. Within the last year or so, the rabbit-plague has grown to such an extent that many runs have been utterly abandoned as worthless by the holders, who of course have ceased to pay their rents to the Crown. All sheep-farmers have been much impoverished, and many ruined. The licenses to occupy runs are generally for a period of ten years; and as these licenses have only, in many cases, a short time to run, it does not pay the tenants to go to much expense in killing rabbits.

The run-holders, as a rule, have done their best to keep down the rabbits, and have tried many different plans. The principal one has been to employ men with large packs of dogs to kill at so much a skin—the skins being properly stretched and dried. These men have generally from twelve to twenty dogs apiece, and of course cause

incessant disturbance to sheep. The dogs, too, often get away from their masters, and worry the stock. Sometimes men are employed to shoot, ferret, and trap. The cost of killing has generally been about twopence a head, and the produce of sale of skins a good deal less.

Various other plans have been tried for abating the nuisance, and ingenious inventors have devised many traps of the most absurd and fantastic description. It was proposed to introduce weasels and other vermin, and one gentleman brought some mongooses from India. The worst of this plan was that while the vermin were getting numerous enough to keep down the rabbits, we were all very certain to be ruined.

Various chemical means have been proposed for smothering the rabbits in their holes. The best plan was suggested by Dr Black, Professor of Chemistry in Dunedin College, to use bisulphide of carbon. This chemical is exceedingly volatile; and if some cotton-waste, or sheepskin saturated with it, is placed in a hole, and the outlets are carefully stopped, the rabbits inside will be certainly killed. A good many people used this plan to a considerable extent; but it was too expensive to attempt by its means to exterminate rabbits, or even keep them in check over large blocks of leasehold hilly country.

The last plan, and that which we all hope is to be the salvation of the country, has been in use for upwards of a year. It is to sprinkle grain poisoned with phosphorus wherever there are rabbits. At first, crushed wheat was used, and a certain quantity of oil of rhodium and sugar was added, to make the bait more attractive. On experience, however, it has been found that oats—about one-third of the price of wheat—are better, and that the oil of rhodium and sugar are not necessary. The process of mixing is now simple and safe. At first, people used to stir the mixture over an open boiler, and so ran great risk from the fumes of phosphorus. A better way is to put the oats into a barrel with a close-fitting lid, saturate them with boiling water, pour in the phosphorus—which has been fused in a small pan of hot water—and then roll the barrel backwards and forwards for a quarter of an hour. The poisoned grain will be fit to lay out when cold. It is usual to sell the poison to men who lay it out on the runs. They collect the skins of the rabbits, and are paid, generally, twopence apiece for them properly stretched and dried.

The cure is certainly wonderful. Wherever the poison has been properly laid, the rabbits have well nigh disappeared, and the nuisance has become a perfectly manageable one. The skins at present prices bring more than it costs to obtain and prepare them, so that any one can afford to clear his run, however short his lease may be. All this good is worked without disturbance to the sheep, and the packs of hideous mongrels which have for years infested the country may at last be done away with.

The objections to the cure are of course obvious. All imported and native game will suffer severely where poison is laid. The rabbits *must*, however, be put down, or else the greater part of the South Island will be made useless. Better import game at some future time, than be driven out of the country. The native birds will not be exterminated. There is too much wild country which is

not occupied, and is not likely to be occupied for many years. There they will be left in peace; and when the rabbits are no longer a curse, the birds will return to the occupied country. As far as I can judge by experience, even where poison is thickly laid, birds do not take it very freely. I hear English larks singing over it every day, and I have never seen a poisoned native titlark, a bird which abounds everywhere. None of the wood-birds are likely to suffer much. Paradise ducks, wekas, and pukekas will feel it most. The pukeka is a kind of land-rail, very numerous and destructive to grain, both when growing and in the stack. The weka is a curious rail which cannot fly, and has already suffered much from rabbit-bites' dogs. I am sorry for the weka and the Paradise duck—the latter a beautiful bird. But the destruction will not be so great as some people fear. Ever since the poison has been laid, I have seen or heard of very few poisoned birds. We must accordingly hope for the best. People are certain to continue laying the poisoned grain till some one invents a better remedy.

### ODD OFFENCES.

LOVERS of liberty as they were, our forefathers had little patience with propounders of novel notions. When Henry Crabb, suddenly awaking to the fact that success in business was not to be attained without much lying and deceit, forswore his calling of haberdasher of hats, and betook himself to playing the hermit, and practising vegetarianism—he was put in the stocks, ousted from one refuge after another, and finally lodged in prison, to prevent others imitating his evil example.—'Sir George Carteret,' says Pepys, 'showed me a gentleman coming by in his coach who hath been sent for up out of Lincolnshire. I think he says he is a justice of the peace there—that the Council have laid by the heels here, and here lies in a messenger's hands, for saying that a man and his wife are but one person, and so ought to pay but twelvepence for both to the Poll Bill, by which others were led to do the like; and so here he lies prisoner.'—The justice, however, received gentler treatment than was accorded twenty years earlier to a woman of Henley-on-Thames; who, venturing to speak her mind respecting the taxation imposed by parliament, was bound fast, and cruelly, to a tree one market-day, and a placard tied on her back, setting forth the enormity of which she had been guilty.

In all times and in every land, an over-free tongue has proved troublesome to its possessor. In Plantagenet times one man was sent to prison for twelve months for offering to call the chief magistrate of London a scoundrel, and fight him too, if any one would pay him for his pains. Another was pilloried for saying the Mayor had been sent to the Tower. And Roger Jorold, for foolishly boasting that if he caught that dignity outside the City bounds, he would insure his never getting within them again, had to present the insulted Mayor with a hundred tuns of wine. King James I. ordered two Londoners to be whipped from Aldgate to Temple Bar for speaking disparagingly of Spain's unpopular representative, Gondemar; and Recorder Fleetward let every one know that liberty of

speech was an offence against the Commonwealth, by sending a saucy fellow to jail for venting his enjoyment of a hearty bread-and-cheese meal, by swearing he had supped as well as my Lord Mayor.

In 1877 the magistrates of Tadcaster gave one Leatham two months' imprisonment for audibly anathematising the Queen twice, while the prayers for the Queen and the Royal Family were being repeated at a school-room service; despite his plea of extenuation that he uttered the obnoxious exclamations unconsciously, having been talking about the Queen's taxes a little while before. A like sentence was passed upon a soldier for publicly consigning the Pope and Mr Gladstone to the place paved with good intentions; but this was in Belfast, where the authorities are particularly severe upon lingual improprieties. Hearing, or fancying he heard the owner of a lagging dog exclaim, 'Come along, you old papist!' a zealous officer summoned him for using party expressions in the streets. The offender averred that he said, 'Come along, old Pepper'—that being the animal's name; whereupon the magistrate kindly said he would give him the benefit of the doubt, which he did, by fining him five shillings.

Soon after the Germans took possession of the provinces ceded by France, they sent an Alsatian girl to prison for criticising the photograph of the Grand-duke of Baden in disrespectful terms; and fined a Lorraine woman five thalers for marking her disapproval of a soldier's primitive habits with the exclamation: 'What! with all our five milliards, they have not got pocket-handkerchiefs yet!' Of course, French journalists did not omit to enlarge upon the tyranny of the Germans; but they were discreetly silent when a Parisian with a grievance was punished for telling a friend that somebody was as 'cowardly as MacMahon.' A few months later, he might have abused the Marshal to his heart's content with impunity.

It does not do to be in advance of one's day. In 1618 a Weymouth butcher was amerced in three shillings and fourpence for killing a bull unbaited, and putting the flesh thereof unto sale. About the same time, certain good citizens of Worcester presented a formal complaint against John Kempster and Thomas Byrd for not selling their ale according to the law, charging only a penny a pint for beverage of such extraordinary strength as to lead to assaults, affrays, bloodsheddings, and other misdemeanours; in other words, for giving their customers too good an article—an offence not by any means likely to occur in our modern world.

Brutality to women rarely entails adequate punishment, but we cannot but wonder at a cruel husband receiving a twelvemonth's imprisonment for what the reporter termed an inhuman assault upon his wife; since, so far as appeared, his inhumanity was limited to playing the Dead March in Saul over his helpmate. He had evidently some music in his soul; like the work-house official who lost his situation for setting three blind fiddlers to play as many tunes, while he sang a song having no connection with one or the other.—A humorous rogue, too, was the needy tailor who sheared the tails off the coats of the playgoers waiting at the doors of a Liverpool theatre, and was captured with his spoil upon him.—Another original offender solaced his disappointed love by going to witness the consummation of his rival's triumph, and strewing the church floor



with fulminating powder, which exploded at every movement of the bridal party.

The law presumes that everybody knows what he may and may not do, and acting on that presumption, unpleasantly enlightens those who are not so wise as they should be. The eldest of three men charged with stealing primroses from a wood, said: 'The primroses grow of themselves; who ever heard of stealing primroses?' The prosecuting farmer owned that the primroses grew wild, but he 'made property of them,' and they were not to be reached without crossing his fenced-in land. The magistrate, discharging the offenders with a warning, informed them that though there was no law forbidding the gathering of wild-flowers in the lanes and hedgerows, it was unlawful to trespass upon private land and take anything away.—An Illinois citizen brought his daughter's young man before a justice for violently ejecting him from his own parlour one Sunday evening. After hearing the other side, the justice said: 'It appears that this young fellow was courting the plaintiff's gal, in plaintiff's parlour; that plaintiff intruded, and was put out by defendant. Courting is a public necessity, and must not be interrupted. Therefore the law of Illinois will hold that a parent has no legal right in a room where courting is afoot. Defendant is discharged, and plaintiff must pay costs.'

Different notions as to the necessity of courting prevail in Texas, or a susceptible individual would hardly have been fined for telling a pretty girl he should very much like to kiss her: leaving him as much puzzled as to where the justice came in, as the man in Indiana, who, returning home from a journey, found the house empty, his wife having raffled all the furniture, and absconded with the proceeds; and before he thoroughly comprehended the situation, found himself arrested by the sheriff for permitting gambling on his premises!

If it be unwise to prophesy unless you know, it is something worse than unwise to advance accusations impossible to sustain. Yet if newspaper reports are to be believed, a bill-sticker was prosecuted for the incomprehensible offence of burning somebody's 'photograph in effigy'; Elizabeth Simmons was charged with being the father of Henry Wood's child; and a drunken laundress arraigned for assaulting a policeman by 'springing up and striking him in the chest with the soles of both her feet at the same time, dropping on them again like an acrobat'; a feat the constable swore the prisoner performed, in spite of her pertinently demanding where her body was at the time, 'as she wasn't a spring-board.'

A sapient coroner read a witness a severe lecture upon the enormity of being out of bed at one o'clock in the morning, refusing him his expenses by way of marking his disapproval of such an impropriety. Of the same way of thinking was constable Snooks who took a man into custody for presuming to come outside his own door at that early hour, after the zealous officer had put him inside the house. Another active and intelligent officer, catching a young man, late at night, in the heinous act of putting his latch-key into its proper keyhole, hauled him, spite of resistance, to the station-house; and next morning had the satisfaction of hearing the magistrate indorse the action, and sentence the delinquent to a spell of hard labour for 'resisting an officer in the execution of

his duty.' Some magistrates seem to hold that the police are masters rather than servants of the public, and that the latter are bound to submit quietly to any indignity at their hands. A Bermondsey shopkeeper having been hustled by a number of constables proceeding to their beat, demanded the sergeant's number, upon which he was pushed through a shop window, and promptly arrested for being drunk and disorderly, and breaking the ranks of the constabulary. The magistrate who heard the case was compelled to pronounce the charges false and frivolous, but told the accused he had only himself to blame; taking the sergeant's number was a very foolish thing to do, for 'to take their number gave many constables great offence.'

Right and wrong is often a mere question of locality. Long after coffee was an established beverage in every European land, a schoolmaster of Hesse was sent to prison for drinking it in defiance of the decree of his High Mightiness the Landgrave, who, like other well-intentioned law-makers, could not endure that any one should enjoy a thing displeasing to his own palate. In 1875, three French ships in the harbour of St Pierre, Martinique, failed to lower their yards on Good Friday. Next day, each captain was fined a hundred francs for outraging the religious sentiments of the people. But when a Paris linen-draper advertised that his shop would be closed the following Sunday 'for repairs,' and the *Univers* denounced the notification as an outrage upon the religious sentiments of Christian women, which they ought to resent by shunning the shop for evermore, the linen-draper went to law, and obtained four thousand francs damages for the libel.

When at Rome, do as Rome does, is easily said, but not so easily accomplished. A Western man spending a day in Boston, bought a cigar, and started for a stroll. He had not gone many yards before he was tapped on the shoulder by a police-officer, who politely informed him that he had incurred a penalty of two dollars by smoking in the street. The innocent offender handed over two dollars, and walked on. Presently, he came across a hungry-looking urchin, to whom he good-naturedly proffered a piece of gingerbread, and immediately a policeman was at his elbow intimating he had thereby violated a city ordinance. Tendering his informant a three-dollar bill, with instructions to keep the change, as he should want to whistle by-and-by, and might as well pay beforehand, the disgusted visitor went on his way, resolved never again to make holiday in Boston.

## THE MONTH.

### SCIENCE AND ARTS.

THE cry of 'New lamps for old ones,' once heard in the streets of Bagdad, has, since the invention of the Jablochhoff electric 'candle,' gone up from every city of the civilised world. Lamps, or regulators, carbons, dynamo-machines, and everything pertaining to 'the subtle fluid,' continue to keep inventors busy with improvements, and to baffle patent agents by the family likeness which many of them present. The wedding of the magnet and the steam-engine has been celebrated with so much pomp and circumstance, that the once inevitable battery has been almost forgotten. At one time the subject of no end of



improvements and new forms, inventors seem to have dismissed it as a thing with which further dealing was unprofitable, so far as electric lighting is concerned. One experimenter, however, M. Faure, has not so regarded it; and if all accounts be true, the battery cell must once more in his hands assume fresh importance.

M. Faure's invention consists in a modification of the well-known secondary battery introduced some years ago by his fellow-countryman Planté. This consisted of sheets of lead immersed in acidulated water, which could be gradually charged by means of a couple of Grove's or other cells, and which would give out when required the whole force so stored up. M. Faure's improvement consists in coating the metal sheets with red oxide of lead, by which the capacity of the battery is said to be increased forty-fold. A correspondent of the *Times* describes how he lately conveyed from Paris to Glasgow a charged battery of this description. To use his own words: 'I had the satisfaction of presenting to Sir William Thomson, M. Faure's rare offering of a box of electricity, intact and potent, holding by measurement within that small space of one cubic foot, a power equivalent to nearly one million of foot-pounds.' If this discovery bears out the promise of its infancy, we may possibly soon hear of a Limited Company being started for the supply of condensed lightning to small consumers. The demands of the photographic world alone would insure its success.

Mr Fleuss, whose diving system has already been fully explained in these columns, has recently had the opportunity of demonstrating before the Admiralty authorities at Portsmouth the advantages of his invention both for submarine work, and for use in exploring places full of smoke or noxious gases. For half an hour, Mr Fleuss remained in a chamber specially charged with the densest and most suffocating smoke it was possible to produce. At the end of that time, he was requested to come out, for it was considered that the test had been sufficient for all practical purposes. The experiment has, of course, special bearing upon the extinction of hidden fires on shipboard; and it is probable that its success may lead to the adoption of the Fleuss apparatus as part of the equipment of every vessel in commission.—The same inventor is projecting the construction of a submarine boat, which will afford no mark for the fire of an enemy, and which will be able to carry on subaqueous torpedo warfare of a most terrible description. Mr Fleuss, by his diving apparatus and his smoke-breathing contrivance, has done what he can to save men's lives. He now proposes with his submarine boat to destroy them wholesale. It is difficult to say that we wish such an awful weapon success; but we may express a hope that, in the future, the general acceptance of the principles of arbitration, necessitated by such an invention, will prove it in reality a boon to mankind.

The Telephone has been enlisted in a new service at Chicago, as an aid to the police and patrol system of the city. Public alarm-stations, resembling sentry-boxes, are established at various points. In case of emergency, a citizen can communicate from one of these boxes to the nearest district office, and obtain what aid he needs. He can, if necessary, lock himself in secure from attack, and at the same time telegraph his

difficulty to the police. Every officer is required to telephone half-hourly the events which come under his observation. Telephonic communication is said to have met with great favour in China, where the difficulties of telegraphic signalling are very great, owing to the language possessing no alphabet.

M. Friedel has introduced a new liquid hydrocarbon, which, according to recent experiments, seems to be possessed of extraordinary qualities. It boils at one hundred degrees Fahrenheit, gives a brilliant white light, unaccompanied by heat; and the slightest puff of wind will extinguish it in case of accidental ignition. The corner of a pocket-handkerchief, or even the finger, can be dipped into it, lighted, and used as a temporary torch without any injury to the novel wick. Owing to the cold produced by the rapid evaporation of the liquid, it would thus seem possible, by means of this new agent, to make one finger serve as a taper whilst sealing a letter with the others.

The *Scientific American* records a remarkable accident which lately occurred in a cavern in Mexico. The governor of the district had, in honour of some American visitors, invited them to a grand banquet in the cave. The strange picnic party numbered nearly five hundred, and they had arranged to pass the night in their subterranean quarters. After dinner, many of them were seized with faintness, and it speedily became evident that the cave, like the *Grotto del Cane* in Italy, was highly charged with some deleterious vapour. The visitors speedily beat a retreat, but not before some of them were almost insensible, and had to be carried out by their friends.

The specification of a patent for obtaining photographs in colour has recently been made public; and although it seems rather too elaborate for commercial use, it exhibits much ingenuity. From a negative, a positive proof is taken upon paper in the usual way; but it is purposely only slightly printed, a ghost of what an ordinary print should be. This serves as a guide for the colourist, who by its aid fills in the picture with broad masses of bright colour without any regard to light or shade, much as a child would adorn a wood-cut with water-colours. The surface now receives a coating of albumen, to protect its tints from the after-treatment. This consists in rendering the paper once more sensitive to light, by floating it on a bath of nitrate of silver. It is then placed once more beneath the original negative, so that the image can be printed in its full vigour above the colour. The print is then toned and fixed in the ordinary manner; and a photograph in colour is the result.

One of the most important advances in photography is represented by the argentic paper recently introduced by Messrs Morgan of Greenwich. Requiring no preparation further than that it receives at the hands of its makers, this paper will prove quite a boon to photographers for the purpose of producing large pictures from small ones. A sheet of the paper, pinned against the wall, receives the image of any small negative by means of a magic-lantern. In a few seconds, the exposure is complete, and the picture, under the persuasion of a simple developing fluid, speedily makes its appearance. This application of the new gelatine process—for the paper is coated with

gelatino-bromide of silver—forms the subject of a daily demonstration at the Royal Polytechnic, London, where a negative measuring three inches across is enlarged to thirty inches by an exposure to light of only seven seconds.

In most treatises on electrical science, we learn that moist air forms a good conductor; and for this reason telegraph lines in a damp atmosphere are subject to loss of current, and frictional electric machines lose their virtue unless warmed up to fever-heat. Professor Marangoni has recently published the results of an experiment which seems to refute this old doctrine. Filling an inverted vessel full of steam, he pushed into it a charged Leyden jar. In five seconds it was removed, and would give no spark—showing that the electricity had been dispersed. But it seems that this silent discharge was due to the film of water formed by condensation on the surface of the jar; for when, on repeating the experiment, the steam-chamber was warmed, so as to prevent such condensation, the charged jar remained intact.

One of those curious little accidents which have so often led observing men to useful discoveries, occurred not long ago in a Berlin feather-dyeing establishment. A feather which had been dyed with one of the violet products of aniline was laid aside on a sheet of paper upon which some ammonia had been spilt. The feather was seen to speedily become green in certain parts, presenting a novel and beautiful appearance. The hint thus given has been taken advantage of in the production of variegated feathers and flowers which owe their peculiarity to the same treatment.

Not many months ago, London householders were all complaining of a sudden and mysterious increase in their gas bills. Letters to the newspapers without number, from aggrieved consumers, more than hinted that the Gas Companies, to suit their own ends, were compassing this by certain suspicious operations at the works. The cause of this undoubtedly enormous increase in the consumption of gas has lately been ventilated in the Report of Mr Heisch—the gas examiner to the corporation—whose attention was specially directed to the question. It seems that before the new large mains were opened from the Beckton gas-works to the city, the old pipes would not bear the pressure desired by consumers without serious leakage and loss to the Gas Company. When the new pipes were completed, increased pressure was adopted; but the consumers were not prepared for it, and roared away their gas unmindful of the new conditions. It may be useful to our readers to note that it is within their own power to regulate the supply by means of the main stop-cock placed at the meter. When this is so set that no flame in the house will roar, the pocket of the consumer will not suffer.

Messrs Richter, of Chemnitz, have introduced a new method of cutting and ornamenting glass, which is said to possess many advantages. German-silver discs are impregnated with diamond dust, and afterwards used in various forms to abrade the surface of the glass. By this means the brittle material can be carved, cut, or otherwise treated without risk of injury. In the form of cylinders, the compound metal will cut holes in glass plates of any required size.

A mania, now almost extinct, existed some years ago for writing long compositions in such small

characters that they covered no more than the space occupied by a sixpence. Later on, a machine was invented which gave a microscopic copy of any writing made by its aid, its principal use being for the purpose of secret despatches. This was superseded, in the Franco-Prussian war, by the micro-photograph, which enabled the copy of a newspaper to be transmitted by pigeon post. The subject has been lately revived in Germany by a shorthand writer executing three thousand words, or rather signs for words, upon a post-card, challenging any one to beat his performance by any other system of shorthand. Subsequently, a prize was offered for the greatest number of words written by any method of stenography upon a post-card. The winner—a student of the Pitman system—succeeded in cramming into the space allotted to him the whole of Goldsmith's *She Stoops to Conquer*, half another play, and an essay—representing collectively 32,363 words!

The ingenious Japanese, who have long been celebrated for the excellence of their paper, have recently used with success belting made of that material in lieu of leather. The increasing demand for steam-machinery in that rising country, gives this new application of paper great interest, especially as, through inefficient tanning, Japanese leather cannot be depended upon for heavy work.

Professor Gamgee—whose name is well known as the inventor of a real-ice rink—has now turned his attention to the production of an engine which works without fire. Any one by holding a bottle of liquid ammonia in his warm hand, will soon find out, by the stopper of the bottle jumping in its socket, that gas is given off at a comparatively low temperature. It is this force that Professor Gamgee uses to propel the piston of his engine. After the work has been done, the ammonia is condensed, and—by a method discovered by the inventor—is returned to the cylinder. Ammonia engines have before been contrived, but have invariably failed.

M. René, of Stettin, has made an important discovery in the art of preserving the woods used in the manufacture of pianos from the influences of moisture and temperature. The wood is subjected to an atmosphere of oxygen which has been charged with ozone by the passage of an electric current. This plan not only is a safeguard to pianos from changes of temperature, but is said to give a rare richness of tone to instruments made of wood so prepared.

Some time after the discovery of the bleaching action of light on the so-called visual purple colour in the retina of several animals, the idea was started that what we call sight may be merely a photographic process. Exaggeration—which always follows the footsteps of any new discovery—soon conceived the notion that the scene last depicted upon the sensitive retina remained there after death, and the notion became current that a murderer might be detected by examining the eye of his victim. Dr Ayres, who has made more than a thousand experiments upon the eyes of animals, and who has succeeded to some extent in obtaining pictures of simple geometric figures, quite negatives this idea. He considers that even under the most favourable results, the dead human eye can give no revelation whatever of the scene it last beheld.

M. Trouvé, whose polyscope for medical purposes has recently been described in these pages, writes to *La Nature* stating that a tricycle of English manufacture driven by electricity has lately been seen in the streets of Paris. Its pace was equal to that of a good ordinary cab. M. Trouvé contemplates the construction of a motor which he believes will obtain a far greater velocity.

The late Fisheries Exhibition at Norwich has brought to the front many inventions having for their object the preservation of fish as food. The importance of bringing within the reach of dwellers in our inland towns a cheap and wholesome food which is provided for them by Nature with such liberality, cannot be gainsaid. Treated with a preservative known as glaciale, a salmon and sole were exhibited in a fresh state, although they had been in the building for twelve days. Attention was also concentrated on Knott's Refrigerating Car for the transport of fish from distant places without injury. This last contrivance met with such approval at the hands of the jurors, that they awarded it a gold medal, a diploma, and a prize of twenty pounds.

According to Professor Huxley, who at this Exhibition lectured on the Herring, the numbers of that fish were so vast that it was impossible to conceive any human means which would make any diminution in the stock. He said that at one time a complaint was raised that trawlers disturbed the spawning-beds; but the truth was that the trawlers came after the flat-fish, and in doing so, actually prevented those greedy marauders from devouring millions of herring-eggs.

A plan for constructing a railway across the continent of Australia is again being discussed. The chief difficulty seems to lie in the extreme arid nature of the country to be opened up; but it is thought that borings may result in the discovery of water.

A large boiler is being built by the Manchester Steam Users' Association for the purpose of an experiment. It is to be fired, and allowed to get short of water until the furnace-crowns are red hot. Cold water is then to be pumped on them, in order to prove that explosions cannot occur under such conditions, provided the boiler is in good condition.

In this connection, it may be mentioned that some time ago the Institution of Mechanical Engineers appointed a Committee to examine into certain questions of research in matters pertaining to their profession. One of these questions is that of riveted joints, such as are used in the construction of boilers, gasometers, &c. The various methods of riveting are all found to be defective, in so far as that the parts riveted together are very much weaker than the plate itself, the plates being weakened by the holes which are bored to receive the rivets. A series of experiments has now been decided upon by the Committee for the purpose of scientifically testing the question, with the hope of ascertaining the method of joining plates which shall give the least percentage of weakness as compared with the solid plates.

The same Committee have also had before them the question of the hardening and tempering of steel. It is known that if a piece of tool-steel be heated, and then suddenly cooled, it becomes much harder, not only on the surface, but throughout, provided its thickness be not excessive. The

greater the range of cooling, the more intense is the hardening, but at the same time the greater the brittleness of the piece. This quality of hardness is therefore modified to suit the purpose in view, by the further operation of tempering. In this process, the hardened steel, after its rapid cooling, is re-heated to a temperature corresponding to the purpose for which it is intended, and then quenched again from that temperature. The particular point at which to stop the re-heating is recognised by one particular hue, in what are called 'the colours of tempering,' which the steel is always seen to assume in succession as its temperature gradually rises. Thus, if the article in question be a sword, it is heated to a bright blue; if it be a cold chisel, it is stopped at a brownish orange. The above Committee are of opinion that these colours are due to the metal, in the process of the second heating, re-absorbing the gases which had been expelled by the first heating and subsequent rapid cooling; and they propose to make a series of experiments to test this theory.

A very perfect form of incubator has lately been patented in America. The gas or oil flame is so controlled by a magnetic regulator, that the heat can never rise or fall beyond certain points. The eggs are automatically shifted in their places at regular intervals by means of clockwork. Many good egg-hatching machines have now been invented; indeed there is no difficulty about procuring chickens by such means. The real difficulty lies in keeping them alive after they have left the egg. Not even the clever Yankees can contrive a 'notion' to successfully imitate a mother's tender care for her little ones.

An anchor, manufactured by Messrs Parkes and Ross, of Tipton and Liverpool, and known as Liardet's Anchor, is noticeable for one or two peculiarities. The chief of these is that the stock of the anchor is provided with flukes, the same as the arms. The arms and stock are so fitted that they can move within a range of forty-five degrees. When stowed, the arms and stock lie in a line with the shank. There is a shackle for the cable, and another near the crown for a buoy-rope. We understand that the P. and O. and some other Companies are using the anchor.

Mr James Stewart, C.E., who recently read to the Royal Geographical Society an account of his survey of the district of Lake Nyassa, in Africa, has had an opportunity of testing the quality of the coal formerly discovered on the shore of that lake by Mr Rhodes. The coal, says Mr Stewart, lies in a clay-bank tilted up at an angle of forty-five degrees. It is laid bare over only some thirty feet, is about seven feet thick, and hardly looks as if it were in its original bed. Yet the bed was compact, and full of good coal. He lit a good fire with it, which burned strongly, the coal softening and throwing out gas-bubbles, but giving no gas-jets. It caked slightly, but not so as to impede its burning. On his return to this country, he submitted a specimen of the coal to Mr Caruthers, of the British Museum, who reports that it has the appearance of a good specimen of English coal. After combustion, he found that only 1.8 per cent. of ash remained. He had no doubt that the specimen from Lake Nyassa is of the same age as the coal of England.

In the same paper, Mr Stewart refers to the existence among the natives in Central Africa of



the manufacture of iron from ironstone. These natives occupy the district of country between Lake Nyassa and Lake Tanganyika, and are to all appearance a peaceable and industrious people. They told Mr Stewart that their only desire was to cultivate their gardens and work their iron. All the way between the basins of the two lakes he found traces of ironstone, and in places old workings. On one hillside he counted eight smelting-kilns in good order, within a few hundred yards of each other; and doubtless there were, in his opinion, many more. The kilns in use stand about nine feet high, are five feet in diameter at the base, and three feet at the top, and are built of clay plaster four or six inches thick. They will contain nearly half a ton of iron ore. Charcoal is used for smelting.

The largest steam-hammer in Scotland has just been erected by the Messrs Beardmore, at their Steel and Iron Works, Parkhead, Glasgow. Its erection has been necessitated by the rapid development of the steel manufacture, the old-fashioned tools having been found inadequate to cope with that immensely strong new material. The hammer, which has been named 'Samson,' stands on a bed of concrete, formed by mixing iron borings and slag with cement, twenty feet thick, and weighing five hundred tons. On this bed is a packing of wood, and on this again is placed the anvil-block, forty-three tons in weight—the anvil itself being a mass of five tons more, making forty-eight tons in all. The ram of the steam-hammer weighs twelve tons—which makes the machine nominally a 12-ton hammer. The cylinder weighs seven tons, is four feet in diameter, and is worked at 60-lb. steam pressure. The hammer delivers blows, having a force of between three hundred and four hundred foot tons, with a rapidity which allows the steel to be perfectly worked before growing cool.

The difficulty of transporting boats over a few miles, or even between different land-locks, &c. has often been felt; and in order to obviate this, Mr F. E. Todd, Park Street, The Mount, York, has patented what is called a 'Collapsing Boat Carriage.' It is made of various lengths, is very light yet strong in construction, and when not in use can be packed up in small space and carried in the boat. It appears to be specially useful for the conveyance of long light boats such as those used in regattas, and the transport of which, either by cart or carried by the crew, is always attended with trouble and fatigue, and often with risk to the boat; or it may be used for conveying a boat from one fishing loch to another. The collapsing carriage can be done up for use, or undone, in a few minutes.

#### THE SEA-SHELL MISSION.

In the month of November last, occasion was taken in this *Journal* to draw the attention of our readers to this Mission, the object of which is, by sending little boxes of shells, bouquets of flowers, &c. to the thousands of sick children in the hospitals and poorer homes of London, to give delight and amusement to these suffering little ones, and to brighten their sad surroundings in the great city, far from the fresh breezes of hills and downs, and the beauty of stream and shore. At this season we would specially remind little

seaside visitors of the opportunity thus afforded them of adding to their own happiness by contributing something in this way towards the happiness of other little ones less favoured than themselves. Since 1879 this Mission has distributed 417,103 shells; and any further contributions of the same nature will be gladly received by the Honorary Secretary of the Sea-shell Mission, 24 Richmond Terrace, Clapham Road, London, S.W.

#### NESTLINGS.

O LITTLE bird! sing sweet among the leaves,  
Safe hid from sight, beside thy downy nest;  
The rain falls, murmuring to the drooping eaves  
A low refrain, that suits thy music best.  
Sing sweet, O bird! thy recompense draws nigh—  
Four callow nestlings 'neath the mother's wing,  
So many flashing wings that by and by  
Will cleave the sunny air. O sing, bird, sing!

(Sing, O my heart! Thy callow nestlings sleep,  
Safe hidden 'neath a gracious folding Wing,  
Until the time when, from their slumber deep,  
They wake, and soar in beauty. Sing, heart, sing!)

O little bird! sing sweet. Though rain may fall,  
And though thy callow brood thy care require,  
Behind the rain-cloud, with its trailing pall,  
Shineth undimmed the gracious golden fire.  
Sing on, O bird! nor of the cloud take heed;  
For thou art heritor of glorious Spring;  
And every field is sacred to thy need—  
The wealth, the beauty, thine. O sing, bird, sing!

(Sing, O my heart! sing on, though rain may pour;  
Sing on; for unawares the winds will bring  
A drift of sunshine to thy cottage door,  
And arch the clouds with rainbows. Sing, heart, sing!)

O bird! sing sweet. What though the time be near  
When thou shalt sit upon that swaying bough,  
With no sweet mate, no nestling, by, to hear  
The bubbling song thou sing'st to glad them now!  
Thy task was done, fulfilled in sweet Spring days.  
In golden Summer, when thy brood take wing,  
Shalt thou not still have left a hymn of praise,  
Because thy work is over? Sing, bird, sing!

(Sing, O my heart! What if thy birds have flown?  
Thou hadst the joy of their awakening,  
And thousand memories left thee for thine own;  
Sing thou, for task accomplished. Sing, heart, sing!)

F. C. A.

#### FRANK BUCKLAND MEMORIAL FUND.

The Editor begs to acknowledge receipt of £1 from Mr Tapling, Ringswood, South Dulwich.

The Conductors of CHAMBERS'S JOURNAL beg to direct the attention of CONTRIBUTORS to the following notice:

- 1st. All communications should be addressed to the 'Editor, 339 High Street, Edinburgh.'
- 2d. To insure return in case of ineligibility, postage-stamps should accompany every manuscript.
- 3d. MANUSCRIPTS should bear the author's full Christian name, surname, and address, legibly written; and should be written on white (not blue) paper, and on one side of the leaf only.
- 4th. Poetical offerings should invariably be accompanied by a stamped and directed envelope.

Unless Contributors comply with the above rules, the Editor cannot undertake to return ineligible papers.

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